1990-12

An historical analysis of DON procurement appropriations during fiscal years 1981 through 1989

Rector, Herschel H.

Monterey, California: Naval Postgraduate School

NAVAL POSTGRADUATE SCHOOL

Monterey, California

THESIS

AN HISTORICAL ANALYSIS OF
DON PROCUREMENT APPROPRIATIONS
DURING FISCAL YEARS 1981 THROUGH 1989

by

Herschel H. Rector

December 1990

Thesis Advisor: Richard B. Doyle

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED	1b. RESTRICTIVE MARKINGS
2a. SECURITY CLASSIFICATION AUTHORITY	3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release;distribution is unlimited
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE	
4. PERFORMING ORGANIZATION REPORT NUMBER(S)	5. MONITORING ORGANIZATION REPORT NUMBER(S)
6a. NAME OF PERFORMING ORGANIZATION Naval Postgraduate School 6b. OFFICE SYMBOL (*If applicable*) 36	7a. NAME OF MONITORING ORGANIZATION Naval Postgraduate School
6c. ADDRESS (*City, State, and ZIP Code*) Monterey, CA 93943-5000	7b. ADDRESS (*City, State, and ZIP Code*) Monterey, CA 93943-5000
8a. NAME OF FUNDING/SPONSORING ORGANIZATION 8b. OFFICE SYMBOL (*If applicable*)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
8c. ADDRESS (*City, State, and ZIP Code*)	10. SOURCE OF FUNDING NUMBERS Program Element No / Project No / Task No / Work Unit Accession Number

11. TITLE (*Include Security Classification*)
An Historical Analysis of DON Procurement Appropriations During Fiscal Years 1981 Through 1989

12. PERSONAL AUTHOR(S) Rector, Herschel H.

13a. TYPE OF REPORT	13b. TIME COVERED	14. DATE OF REPORT (*year, month, day*)	15. PAGE COUNT
Master's Thesis	From To	1990, December	62

16. SUPPLEMENTARY NOTATION
The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.

17. COSATI CODES			18. SUBJECT TERMS (*continue on reverse if necessary and identify by block number*)
FIELD	GROUP	SUBGROUP	DON Procurements, Navy Procurement Budgeting, Aircraft Procurement, Weapons Procurement, Shipbuilding and Conversion Procurement, Other Procurement, Procurement, Marine Corps

19. ABSTRACT (*continue on reverse if necessary and identify by block number*)

This thesis examines the U.S. Navy's involvement in the defense buildup program by focusing on Department of the Navy procurement budgets during fiscal years 1981 through 1989. Appropriated Budget Authority for five DON procurement appropriations are examined for the major trends exhibited during this period.

The data collected for the nine year period, FY 1981 through 1989, indicated that Department of the Navy procurement budgeting, primarily incremental in nature, is significantly affected by other factors. The trends exhibited by the procurement appropriations indicated sensitivity to DON funding levels as well as to explicit policy changes by Congress and the President. These trends emphasize the need for precise planning, programmming, and budgeting by the Navy to ensure the necessary resources are available to meet commitments during negative growth in DON budgets during the 1990's.

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT	21. ABSTRACT SECURITY CLASSIFICATION	
☒ UNCLASSIFIED/UNLIMITED ☐ SAME AS REPORT ☐ DTIC USERS	UNCLASSIFIED	
22a. NAME OF RESPONSIBLE INDIVIDUAL Richard B. Doyle	22b. TELEPHONE (*Include Area code*) (408) 646-2905	22c. OFFICE SYMBOL AS/DY

DD FORM 1473, 84 MAR 83 APR edition may be used until exhausted
All other editions are obsolete

SECURITY CLASSIFICATION OF THIS PAGE
UNCLASSIFIED

Approved for public release; distribution is unlimited.

An Historical Analysis of
DON Procurement Appropriations
During Fiscal Years 1981 through 1989

by

Herschel H. Rector
Lieutenant, United States Navy
B.P.A., Mississippi State University, 1979

Submitted in partial fulfillment
of the requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL
December 1990

Author: [redacted]
Herschel H. Rector

Approved by: [redacted]
Richard B. Doyle, Thesis Advisor

[redacted]
Doug Moses, Second Reader

[redacted]
David R. Whipple, Chairman
Department of Administrative Sciences

ABSTRACT

This thesis examines the U.S. Navy's involvement in the defense buildup program by focusing on Department of the Navy procurement budgets during fiscal years 1981 through 1989. Appropriated Budget Authority for five DON procurement appropriations are examined for the major trends exhibited during this period.

The data collected for the nine year period, FY 1981 through 1989, indicated that Department of the Navy procurement budgeting, primarily incremental in nature, is significantly affected by other factors. The trends exhibited by the procurement appropriations indicated sensitivity to DON funding levels as well as to explicit policy changes by Congress and the President. These trends emphasize the need for precise planning, programming, and budgeting by the Navy to ensure the necessary resources are available to meet commitments during negative growth in DON budgets during the 1990's.

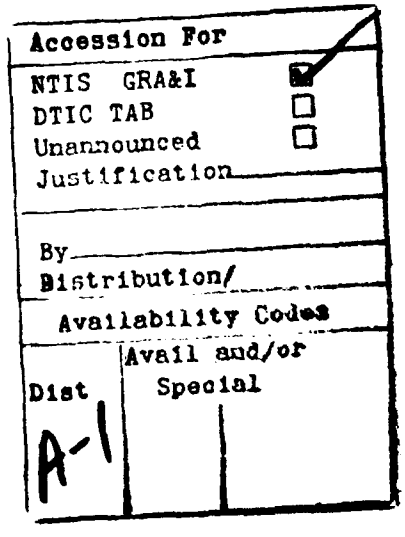

TABLE OF CONTENTS

I. INTRODUCTION

In April 1980 the U. S. Army's elite Delta Force suffered a humiliating defeat without a single shot fired. An attempted rescue of American citizens held hostage in Iran had ended in dismal failure. The blame for the failure, in the minds of Delta Force personnel, rested with the RH-53 Sea Stallion helicopters used in the aborted rescue attempt.[Ref. 1]

The Sea Stallion helicopters were incapable of making the 900 mile flight from the USS Nimitz in the Gulf of Oman to the hostage site in Tehran without stopping to refuel. It was during this refueling stop, at a location called Desert One, that disaster struck. One of the Sea Stallions crashed into a parked EC-130 Hercules and ended the rescue attempt. Two other Sea Stallions had already aborted the mission due to mechanical difficulties. The crash of the third helicopter left an insufficient number to successfully carry out the mission so the rescue attempt ended in failure.

Was this just a freak occurrence or was this an indication of a lack of readiness and ability by the U. S. military forces to perform required missions? Was the U. S. investing a sufficient amount of money to maintain a capable armed force? Many people, at that time, believed the U.S. armed forces to be ill prepared to execute the duties required of

them. In fact, a Newsweek poll taken in 1980 indicated that seven out of ten Americans did not feel the U.S. was keeping pace with Soviet power and influence. Other reports indicated the Soviet Union had been investing substantially more money in their military forces. [Ref. 2]

In spite of this criticism, a review of U. S. Department of Defense (DOD) budgets discloses huge sums devoted to DOD investment. During the two decades, FY 60 - FY 80, DOD Procurement Budget Authority (BA) totaled more than $420 billion and averaged 26.0 percent of the total DOD $1.6 trillion budget.

However, in response to the perceived investment deficiency, a substantial increase in defense procurement took place during the Reagan administration. Between FY 1981 and FY 1989, President Reagan's administration embarked on the largest peacetime military buildup in U. S. history, as the country attempted to find satisfactory answers to the questions of military preparedness. During this eight year period, DOD procurement BA equalled $708 billion or 30.6 percent of a total DOD budget of $2.3 trillion. This represented an increase in DOD procurement BA over the previous two decades of 59.3 percent in current dollars. Total DOD spending during the same period increased by only 43.8 percent over the FY 60 - FY 80 period.[Ref. 3]

A. THE RESEARCH QUESTION

This thesis will examine the U. S. Navy's involvement in the defense buildup program by focusing on DON procurement budgets during fiscal years 1981 through 1989. Major trends will be highlighted and a comparison of budget requests to actual funding received will be made.

B. SCOPE, LIMITATIONS AND ASSUMPTIONS

The compilation of DON procurement budget data is limited to historical Budget Authority figures for the period fiscal year 1981 through fiscal year 1989. Outlay figures were not used because it was assumed that Budget Authority are more indicative of intentions and , therefore, do a better job of signalling changing initiatives by the President and Congress.

C. LITERATURE REVIEW AND METHODOLOGY

Preparation of the data base involved primarily information collection from the Budget of the United States Government for fiscal years 1980 through 1989, from the Assistant Secretary of Defense's National Defense Budget Estimates, other official government publications and Congressional Budget Office analyses. A thorough review of literature concerning DON financial resources was conducted and yielded several sources cited in the body of the study.

D. ORGANIZATION OF STUDY

Chapter I provides a general description and direction of this study. Chapter II moves to background information on the DOD in President Carter's last year in office and as President Reagan took over. Chapter III describes the data base used and the results of the study. Chapter IV explains the results in terms of major trends identified. Finally, Chapter V offers conclusions drawn from the study.

II. BACKGROUND

A. DOD PROGRAM AS REAGAN TOOK OFFICE

As President Reagan took office in January 1981, the headlines in leading newspapers and magazines reported deficiencies in readiness within the U.S. armed forces. Prior to his election, candidate Reagan claimed the U.S. had not kept pace with the Soviet's military buildup. [Ref. 2] Experts contended that Moscow had invested $240 billion more than the U.S. during the decade of the 1970's resulting in a Soviet numerical advantage and a narrowing of the U.S. technological advantage. It was argued that USSR missile guidance systems had so improved that a "window of vulnerability" had developed that threatened the U.S. with nuclear blackmail due to a potentially successful Soviet first strike capability. [Ref. 2]

President Reagan's campaign had included a promise to build U. S. defense to the point that no other nation would dare challenge the U.S. militarily. Building military capability requires investment in aircraft, ships, tanks, and other types of equipment as well as spending to recruit, train, and retain personnel. Investment by the military is accomplished primarily through procurement and research and

development. Funds for these purposes are granted by Congress through procurement appropriations and research and development appropriations. Investment by the Navy in aircraft, ships, and other naval equipment, which played a part in the Reagan defense buildup, will be examined in the following chapters.

This chapter will briefly examine the status of the DOD at the beginning of the Reagan presidency through a review of the budgets for FY 1960 through FY 1980, a review of President Carter's FY 1981 budget, and a look at some of the changes instituted by the Reagan administration to correct perceived deficiencies. It will also detail the size of the U. S. Navy at the beginning of the defense buildup and the Reagan administration's proposed changes to Naval forces and structure.

B. DOD BUDGET FROM 1960 - 1980

In 1960, Department of Defense Budget Authority stood at $40.9 billion or approximately 44 percent of the total Federal Budget. By 1980, this share had decreased to slightly more than 24 percent. DOD BA equaled about 8.1 percent of Gross National Product (GNP) in 1960 and about 5.3 percent in 1980. Converting these numbers to constant FY 1990 dollars shows DOD BA as 10 percent of GNP in 1960 and 5.3 percent in 1980.[Ref. 3]

Secretary of Defense, Harold Brown, in his FY 1980 Annual Report to Congress, sketched the size of the DOD which he and President Carter hoped to maintain. The FY 1980 Budget reflected President Carter's influence and helped to shape the scope and nature of the DOD inherited by the Reagan administration.

Secretary Brown's sketch included active duty forces, Reserve and National Guard forces, as well as overall DOD budget figures. Because of their relatively small size and impact, non-active duty forces and budget figures are not included in the discussion that follows in this study.

The FY 1980 report estimated the approximate number of personnel in the U.S. Armed Forces, as shown in Table 1, at 2,073,000. According to Secretary Brown's report, the U.S. possessed 2122 strategic delivery vehicles consisting of 1709 missiles and 413 bombers. The Army had 16 divisions and 5 separate brigades. The Marine Corps consisted of 3 divisions.

As indicated in Secretary Brown's report, there were 6136 aircraft among the Air Force, Navy, and Marine Corps aircraft squadrons. These included airlift, and defensive as well as strategic and tactical squadrons. The Navy owned approximately 460 major naval combatant, amphibious, and auxiliary vessels, according to the report.[Ref. 4]

Secretary Brown's report stated that in real terms, operating expenses for military forces had remained relatively constant during the period 1964 to 1980 due mainly to a

TABLE 1

DEPARTMENT OF DEFENSE MANPOWER
Active Duty Military
(End-Strength, in Thousands)

FY	Army	Navy	MC	AF	Other	Total
1960	873	618	171	815	-	2,476
1961	859	627	177	821	-	2,484
1962	1,066	666	191	884	-	2,808
1963	976	665	190	869	-	2,700
1964	973	668	190	857	-	2,687
1965	969	672	190	825	-	2,655
1966	1,200	745	262	887	-	3,094
1967	1,442	751	285	897	-	3,377
1968	1,570	765	307	905	-	3,548
1969	1,512	776	310	862	1	3,460
1970	1,322	692	260	791	1	3,066
1971	1,123	623	212	755	1	2,714
1972	811	881	987	726	1	2,323
1973	801	564	196	691	1	2,253
1974	783	546	189	644	1	2,162
1975	784	535	196	613	1	2,128
1976	779	524	192	585	2	2,083
1977	782	530	192	570	4	2,077
1978	771	530	191	569	5	2,067
1979	758	522	185	559	8	2,032
1980	777	527	188	555	23	2,073

Source: National Defense Budget Estimates for FY 1990/1991, Office of the Assistant Sec. of Defense (Comptroller), March 1989.

significant drop in manpower. The 2,073,000 personnel estimated for FY 1980 was down from 3,066,000 a decade earlier, a drop of almost one million.

These manpower figures indicated the general trend in the shrinking of DOD that had taken place during the 1960's and, especially, the 1970's. Table 1 shows that active duty manpower started the 1960's decade at less than 2.5 million, grew to more than 3.5 million by 1968, then steadily decreased to just over 2.0 million in 1980.

This general trend is supported by budget figures for the period. Figure 1 displays DOD BA in current dollar terms as a percentage of Gross National Product (GNP). It shows DOD's share of GNP to have decreased steadily for more than twenty years before reversing by FY 1980.

A look at only DOD procurement budgets for the same time period presents a mixed picture. In current dollars, DOD procurement BA rose from $17.9 billion in FY 1960 to $35.3 billion in FY 1980. However, in constant FY 1990 dollars, procurement BA decreased from $62.0 billion in FY 1960 to $53.2 billion in FY 1980, a drop of approximately 16 percent.[Ref. 3]

Secretary Brown commented on this downward trend with respect to investments when he reported that the DOD in 1980 was living mainly off investments made in the early 1960's. [Ref. 4] The FY 1980 budget planned to reverse this trend by substantially increasing defense investment spending.

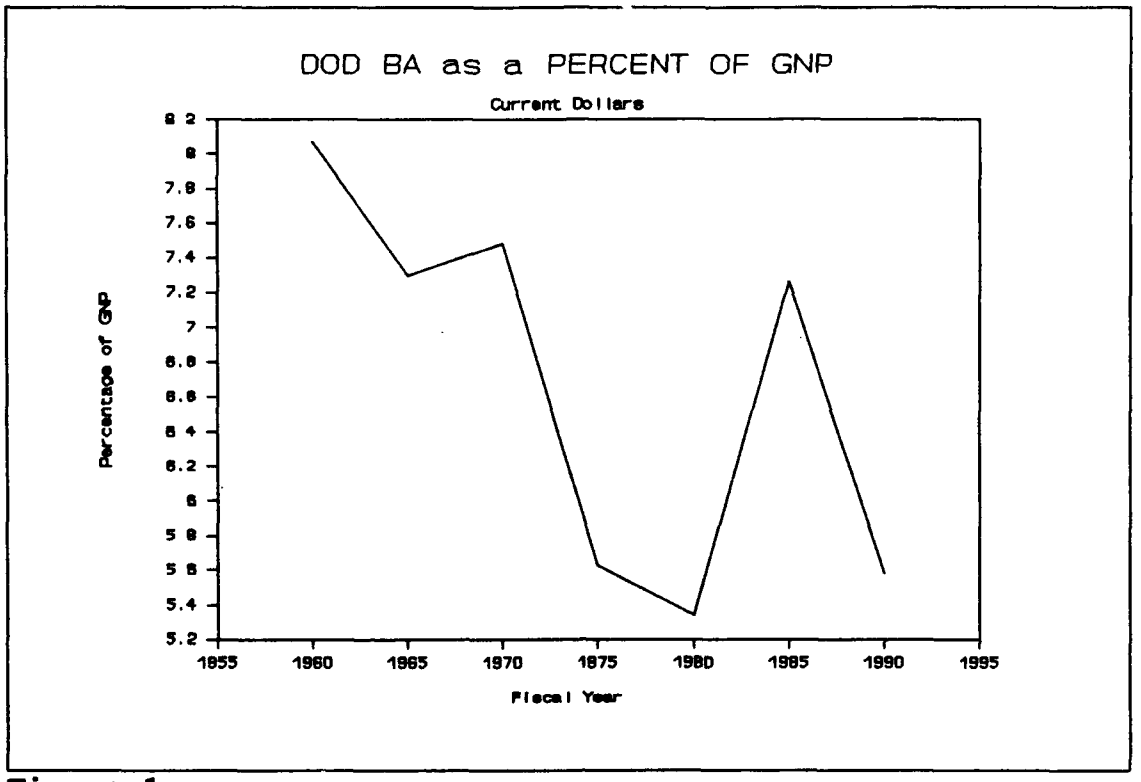

Figure 1

President Carter's FY 1980 budget included $135 billion of new BA or enough for about a 3 percent growth in real terms. The projected defense spending for FY 1984 was set at 4.7 percent of GNP compared to 12 percent and 8.2 percent of GNP for fiscal years 54 and 64 respectively.[Ref. 4]

C. THE BEGINNING OF THE 1980'S BUILDUP

President Carter's FY 1981 DOD budget, inherited by Ronald Reagan, sought to continue the reversal of the downward trend in military investment spending. This budget reflected different priorities than Carter's FY 1980 budget and real growth was concentrated in procurement. The significant

difference between FY 1980 and FY 1981 was in terms of BA.[Ref. 5] The budget requested $17.0 billion in procurement Budget Authority, an increase of 6.9 percent over FY 1980. With this budget, President Carter and Secretary Brown were responding to adverse trends in military spending during the 1960's and 1970's.

D. DOD UNDER REAGAN

The size of the Department of Defense that President Reagan inherited in 1981 was approximately the same as that reported to Congress by Secretary Brown in his FY 1980 Annual Report. The number of personnel had increased slightly to 2,101,000, while the number of ships, aircraft, missiles, etc. were essentially unchanged. [Ref. 4]

Even though President Carter's FY 1981 budget projections for the outyears anticipated real growth in DOD BA, President Reagan's administration proposed sharply higher increases in its submissions to Congress. The FY 1982 budget, transmitted to Congress in March 1981, contained substantial increases over amounts included in the previous year's budget. A supplemental appropriation request for FY 1981 was also submitted that restored many Carter Administration cuts to defense programs concerning combat readiness and the strategic balance.[Ref. 6]

Candidate Reagan had called for massive changes to President Carter's resource allocations and Reagan's FY 1982

budget submission stressed mainly procurement and research and development appropriations.[Ref. 7] Reagan's FY 1983 budget proposed continuance of increased investment for the next five years. His administration proposed an increase during FY 1983 to FY 1987 in tanks, helicopters, and aircraft for the Army and Marine Corps, as well as a 600 ship Navy. His proposals amounted to more than $1.6 trillion in defense BA during this time period, a 50 percent increase over the previous five years.[Ref. 5] Reagan's FY 1988 and FY 1989 budgets continued to request real growth in defense spending despite opposition in Congress.

Defense BA in current dollars increased significantly during the 1980's, by 86 percent between FY 1981 and FY 1989. The increase measured in FY 1990 constant dollars was only 35 percent, still a significant increase. Defense BA in FY 1990 dollars peaked in FY 1987, then declined for the next four years and is projected to continue to decline in coming years. [Ref. 4] The Congressional Budget Office projects that defense BA will decline by 19 percent in real dollars between FY 1991 and FY 1995, a loss of $70 billion inflation-adjusted dollars and $237.5 billion current dollars.[Ref. 5] The DON also experienced similar budgetary swings in resources as discussed in the next section.

E. THE NAVY BUDGET IN 1981

As Reagan came tc office the Navy was experiencing as many troubling problems as the other branches of the armed forces. The number of major ships had shrunk from more than 1,000 in 1970 to less than 500 at the end of 1980. [Ref. 4] Funding for the Navy had decreased from $76.5 billion in BA in FY 1970 to $71.2 billion in FY 1980, a 7 percent decline in real terms (FY 1990 Constant Dollars).

The Navy's procurement budget had grown, in current dollars, from $11.6 billion in 1960 to $35.3 billion in 1980. As Table 2 shows however, in constant dollar terms, Navy procurement budgets actually decreased slightly during this period, from $55.5 billion to $53.2 billion. This decline was in line with the general downward trend for DOD discussed earlier.

The Reagan administration proposed that, of the defense budget increases in coming years, the most significant expansion should be centered on the Navy. The bulk of this increase would be in ships, aircraft, weapon systems, and other investment items. [Ref. 4] Increased purchases of investment items required increases in DON procurement Budget Authority. The remaining sections of this thesis will discuss DON funding for procurement between FY 1981 and FY 1989 and how funding requests, in terms of BA, compared to the funding actually received from Congress.

Chapter III will present a discussion of the major procurement appropriation accounts within DON and their associated historical data for fiscal years 1981 through 1989. Trends within these data will be highlighted and summarized in Chapter IV. The final chapter will provide conclusions drawn from trends within DON procurement appropriations.

TABLE 2

DON PROCUREMENT BA
(in current & constant dollars)

Fiscal Year	Current $	Constant $
1960	11,596	55,516
1961	11,716	58,011
1962	15,746	76,954
1963	16,647	79,302
1964	15,645	70,520
1965	13,836	60,838
1966	20,013	81,362
1967	22,871	89,074
1968	23,408	87,216
1969	20,543	72,843
1970	17,867	62,010
1971	15,702	51,537
1972	17,777	54,471
1973	17,473	49,090
1974	17,028	44,818
1975	16,698	40,478
1976	20,991	47,320
1977	27,922	56,581
1978	29,529	56,581
1979	31,428	52,375
1980	35,283	53,200

Source: Budget of the U.S. Government, fiscal years 1981-1989, U.S. Governement Printing Office, March 1989.

III. DATA BASE

A. SOURCES AND EXPLANATIONS

The primary source of budget data used in this study was The Budget of the United States Government, published annually by the U. S. Government Printing Office. Substantial additional data were obtained from the National Defense Budget Estimates for FY 1990/1991 prepared by the Office of the Assistant Secretary of Defense (Comptroller).

This chapter discusses the five major procurement appropriations found in the Department of the Navy (DON). The five categories are Aircraft Procurement, Navy, Weapons Procurement, Navy, Shipbuilding and Conversion, Navy, Other Procurement, Navy, and Procurement, Marine Corps. These five categories account for the bulk of DON investment and are shown in Appendices A and B, including Net Financing activities. Net financing activities include funds from prior years in each of the procurement categories that are available for funding current year expenditures or require current year funds to cover prior year expenditures.

The remainder of this section provides an explanation of each of the procurement appropriation categories as defined by The Budget of the United States Government, beginning with definitions of appropriation and authorization.

1. Authorization and Appropriation

An authorization is legislation passed by Congress that establishes the purpose and guidelines for a given activity and usually sets a limit on the amount that can be spent but does not provide the actual dollars.[Ref. 8] Authorizations provide the legal authority, by subject, for which funds may be appropriated.

An appropriation is legislation by Congress that enables an agency or department to make spending commitments and actually spend money.[Ref. 8] Appropriations may be less than the amounts authorized but are not supposed to exceed the authorized amounts. An explanation of the five major DON procurement appropriations follows.

2. Major DON Procurements

The Aircraft Procurement category includes funds for construction, procurement, production, modification, and modernization of aircraft and equipment. Also included are funds for aircraft ordnance and accessories.

The Weapons Procurement category refers to funds for the construction, procurement, production, modification, and modernization of missiles, torpedoes, other weapons, and related support equipment and spare parts. This category funds the purchase of strategic and tactical missiles, target drones, and ship's guns and the costs of modernizing these items already in service in the Navy.

The Shipbuilding and Conversion category appropriately provides funds for the construction, acquisition, or conversion of vessels as authorized by law including their armor and armament. This category provides funds for plant equipment, machine tools and installations in public and private plants for ship construction and conversion.

Other Procurement, Navy funds procurement, production, and modernization of support equipment and materials not otherwise provided for by other procurement appropriations. This category includes ordnance (except ordnance for new aircraft, new ships or ships undergoing conversion) and ammunition as well as funds for the purchases of passenger motor vehicles.

The final category is Procurement, Marine Corps. This category is for the expenses associated with the procurement, manufacture, and modification of missiles, armament, ammunition, military equipment, and spare parts and accessories used by the U. S. Marines. It provides the Marine Corps with weapons, ammunition, missiles, combat vehicles, and communications and support equipment for use by the ground element of the marine general purpose forces.

The figures used in this study are Budget Authority (BA) granted by Congress for each fiscal year. BA is defined as an authorization to enter into obligations for payment of Government funds. Most BA is provided by Congress in the form of appropriations and reappropriations which can be increased or decreased by transfers to or from another account.[Ref. 3]

BA is used in this study because it is an accurate measurement of the budgeting associated with DON budget requests and because it is a primary indicator of new initiatives and total buying power provided by Congress and the President.[Ref. 5] Since a large percentage of the BA granted by Congress is discretionary, it clearly highlights new spending decisions.

DON current procurement Budget Authority figures (Appendix A) are converted into 1990 constant dollars (Appendix B) using Department of Defense deflators for Budget Authority taken from the Office of the Assistant Secretary of Defense (Comptroller)'s National Defense Budget Estimates for FY 1990/1991,, Appendix C. All dollar totals are in millions of dollars unless otherwise indicated.

B. RESULTS

A look at the aggregate numbers shows that DON procurement BA, in current dollars, rose from $20.3 billion in 1981 to $31.0 billion in 1989. This represents an annual average increase of $1.2 billion. In constant dollar terms, the total rose from $28.2 billion to $31.9 billion.

Although procurement BA dollars rose during this period, as Figure 2 shows, it declined as a percentage of total DON BA. Procurement BA stood at 35 percent of total DON BA in 1981, increased to more than 43 percent in 1983, then decreased to less than 32 percent in 1989.

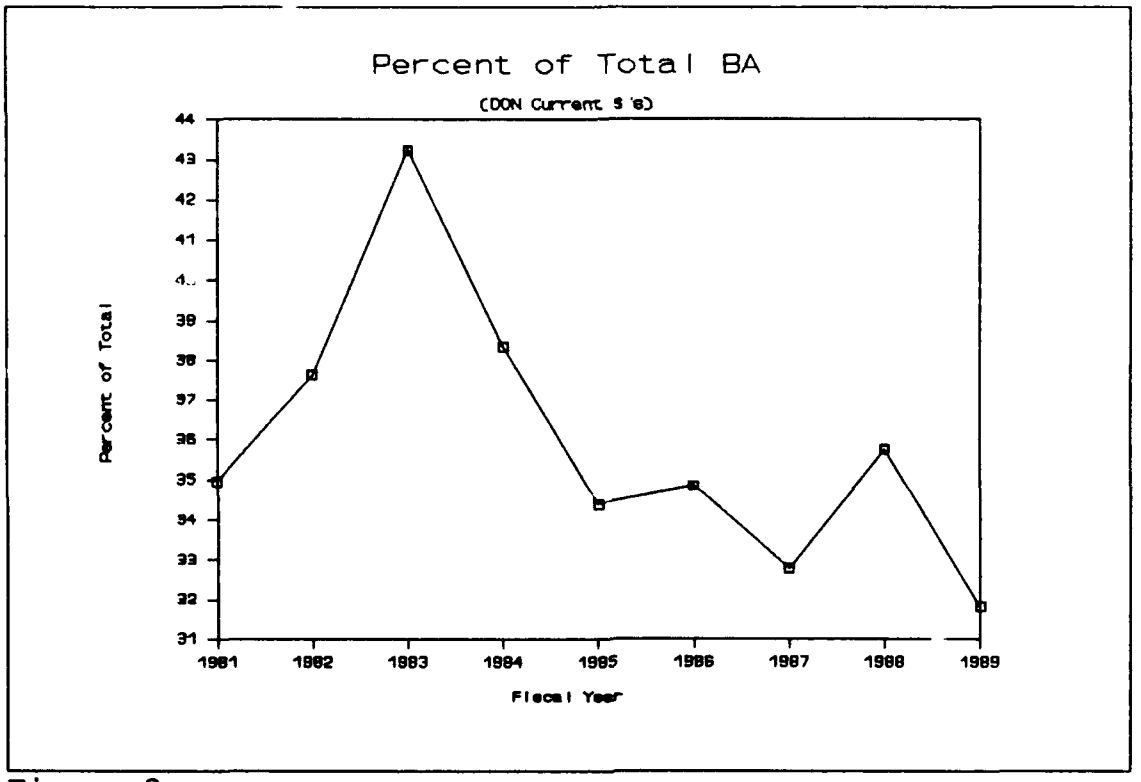

Figure 2

FY 90 constant dollars reflect similar swings. The corresponding increase to $44.2 billion in fiscal 83 from the $28.2 billion in fiscal 81 was a 57 percent change, but by fiscal 89, the change had dropped to only a 13 percent increase.

A discussion of each procurement category beginning with the Aircraft Procurement appropriation follows. Included in the discussion of each category is a comparison between dollars requested and dollars appropriated.

1. Aircraft Procurement (APN)

The Aircraft Procurement appropriation is subdivided into seven subcategories. These are combat aircraft, airlift aircraft, trainer aircraft, other aircraft, modifications to existing aircraft, spares and repair parts, and support equipment.

Budget Authority for aircraft procurement increased steadily from FY 1981 through FY 1985, then decreased throughout the remainder of the decade. Table 3 shows that Aircraft procurement began the decade at $6.3 billion and ended the decade at $9.3 billion, an increase of 49 percent in current dollars. Figures in Table 3 do not contain the net financing amounts included in the Appendices and, therefore, do not add to the totals shown.

TABLE 3

Aircraft Procurement
(in millions of current dollars)

	81	82	83	84	85	86	87	88	89
Combat	4076	6022	6297	6185	6034	5762	6430	5570	5794
Airlift	37	101	279	189	238	209	118	18	2
Trainer	56	74	50	31	103	199	77	375	80
Other	45	73	76	174	120	507	298	433	360
Mods.	693	910	1161	1140	1773	1181	1656	1207	900
Spares	1096	1527	1959	1728	1334	1181	1669	1350	1179
Support	251	313	424	392	628	629	551	509	540
Totals	6254	9028	10184	10159	10898	10496	9868	9032	9342

Source: Budget of the U. S. Government, fiscal years 1981-1989, U. S. Government Printing Office.

In constant dollars the increase was not so dramatic. The increase was from $8.7 billion in FY 1981 to $9.6 billion in FY 1989, an increase of only 11 percent. Aircraft procurement averaged 5.17 percent annual real growth over this nine year period. Only the Other Procurement appropriation category had a smaller real growth during this decade.

Combat aircraft received the largest share of the aircraft procurement budget throughout the FY 1981 to FY 1989 period, averaging $5.8 billion per fiscal year. This average was more than $4.0 billion dollars greater than the next highest category, Spares and Repair Parts. This category's second largest share of the procurement budget was an annual average of $1.4 billion.

2. **Weapons Procurement (WPN)**

Budget Authority for purchases of weapons systems increased dramatically during the 1980's. Its current dollar increase, shown in Table 4, was from $2.8 billion in FY 1981 to $6.5 billion in FY 1989, an increase of more than 220 percent. The growth in real terms was an equally dramatic 163 percent.

A comparison of Budget Authority requested by the administration and the actual Budget Authority provided by Congress is made in Table 8 at the end of this chapter. Funds appropriated for aircraft procurement exceeded funds requested

TABLE 4

Weapons Procurement
(in millions of current dollars)

	81	82	83	84	85	86	87	88	89
Bal. Mis.	876	926	667	616	265	550	1351	1533	2160
Oth. Mis.	1341	1576	2024	2012	2823	3248	3069	2968	3103
Torpedoes	327	473	509	563	597	428	602	662	974
Oth.Weap.	194	191	1596	157	188	159	283	100	110
Spares	0	0	0	0	0	83	150	109	110
Totals	2766	3166	3447	3772	4353	4971	4991	5372	6457

Source: Budget of the U. S. Government, fiscal years 1981-1989, U. S. Government Printing Office.

in FY 1981 and FY 1982 but fell below requested amounts for the remainder of the decade.

Purchases of missiles, both ballistic and other types, accounted for more than seventy to eighty percent of the weapons procurement appropriation. The lowest total was 70 percent in FY 1984 and the largest percentage was 84 percent in FY 1987.

Dollars for ballistic missiles rose through out the decade and came to represent more than 41 percent of total missile purchases by FY 1989. Dollars for procurement of other missile types fluctuated throughout this period. Table 8 compares requested BA for Weapons Procurement to the amounts actually granted by Congress. As can be seen, appropriated amounts exceeded requested amounts for the first two fiscal

years. Thereafter appropriated amounts were less than the requested amounts.

3. **Shipbuilding and Conversion (SCN)**

Procurement dollars appropriated by Congress for Shipbuilding and Conversion experienced significant swings during the 1980's. An examination of Table 5 will show that the subcategory of Shipbuilding and Conversion reached its peak dollar amount in FY 1983 and then climbed to its second highest total of the decade five years later in FY 1988. After climbing to over $15.0 billion in FY 1988, Shipbuilding and Conversion dollars dropped by 72 percent in FY 1989, to only $10.8 billion.

The Other Ships subcategory received by far the greatest proportion of Shipbuilding and Conversion dollars. This subcategory, which funds the purchase and overhaul of attack submarines and nonballistic missile surface ships, consistently received more than 40 percent of the total with an annual average of $6.9 billion from FY 1981 to FY 1989.

The funding of Ballistic Missile Ships, which includes Trident submarines and ballistic missile capable surface ships, received an average $1.1 billion annually or about 11 percent of each year's total Shipbuilding and Conversion budget. The second largest share, with an annual average of 14 percent, went to fund vessels in the Other Ships subcategory.

TABLE 5

Shipbuilding and Conversion
(in millions of current dollars)

	81	82	83	84	85	86	87	88	89
Bal. Ships	1134	331	1527	1262	861	1076	1710	1125	1226
Oth. Ships	3494	5141	11810	4682	5815	5245	7440	12188	6700
Amph. Ships	388	340	469	1225	495	900	419	834	591
Mine. Ships	1510	996	760	606	469	389	247	71	380
Misc. Ships	1092	1795	1455	1644	1448	1222	1915	831	1901
Totals	7618	8603	16021	9419	9088	8832	11731	15049	10798

Source: Budget of the U. S. Government, fiscal years 1981-1989, U. S. Government Printing Office.

The granted Budget Authority compared to the requested Budget Authority is provided in Table 8. Appropriated amounts again exceeded requested amounts in FY 1981 and FY 1982, but then fell below requests for fiscal years 1983 through 1988. In FY 1989 however, Congress provided funds for Shipbuilding and Conversion in excess of administration requests.

4. Other Procurement (OPN)

Table 6 provides the actual BA granted by Congress for each of the subcategories of the Other Procurement appropriation. The items purchased by these funds are equipment not otherwise provided for and include eight subcategories.

The Communications and Electronic Equipment subcategory, that provides for the purchase of shipboard and

TABLE 6

Other Procurement
(in millions of current dollars)

	81	82	83	84	85	86	87	88	89
Sh. Supt.	675	687	534	604	719	763	959	723	698
Coms. Eq.	1054	1155	14130	1465	1386	1657	1860	15468	1411
AV. Supt.	370	561	566	560	913	867	877	748	553
Ord. Supt.	597	827	694	853	1054	1069	1040	926	785
CEC Supt.	74	111	170	144	237	275	219	120	94
Sup. Supt.	69	76	88	58	94	78	88	81	94
Pers. Eq.	191	212	228	205	386	430	590	447	469
Spares	0	0	0	0	0	141	279	267	542
Totals	3030	3629	36668	4323	5342	6103	5803	4357	4646

Source: Budget of the U. S. Government, fiscal years 1981-1989, U. S. Government Printing Office.

shore communications equipment, received the largest share of this OPN budget with an annual average of $1.4 billion. The next three largest shares went to Ordnance Support Equipment, Ship Support Equipment and Aviation Support Equipment respectively. Funding in current dollars for these subcategories rose during the FY 1981 to FY 1989 period by a collective 24 percent. This can be compared to the increase in the Other Procurement category as a whole of almost 55 percent.

Table 8's comparison indicates a similar pattern, as shown in the previously discussed appropriation categories, of requests exceeding appropriations for FY 1983 through FY 1989.

Also following a similar pattern, the FY 1982 appropriated amount was greater than the requested amount. Not following the pattern, the fiscal year 1981 appropriated amount fell below the requested figure.

5. **Procurement, Marine Corps (PMC)**

Funding in the Procurement, Marine Corps appropriation category grew from $0.5 billion in FY 1981 to $1.3 billion in FY 1989. Table 7 lists the seven subcategories that comprise the Procurement, Marine Corps appropriation.

TABLE 7

Procurement, Marine Corps
(in millions of current dollars)

	81	82	83	84	85	86	87	88	89
Ammunition	82	307	449	419	538	486	552	372	80
Weapons	99	433	4460	362	426	125	117	978	180
Missiles	101	214	240	161	275	262	234	297	325
Coms. Eq.	91	322	434	304	280	220	356	312	278
Supt. Veh.	87	152	186	293	233	303	176	81	21
Other Eq.	47	281	206	202	118	175	185	187	129
Spares	0	0	0	0	0	26	37	44	62
Totals	507	1709	1961	1743	1817	1558	1434	1213	1292

Source: Budget of the U. S. Government, fiscal years 1981-1989, U. S. Government Printing Office.

Ammunition for small arms, grenade launchers, motors, artillery, and tanks was the subcategory that received the largest percentage of Budget Authority in this appropriation, with an annual average of $0.4 billion. Average annual funding for the next three largest subcategories, Weapons and Vehicles, Guided Missiles, and Communications Equipment, was about even at $0.3 billion, $0.2 billion, and $0.3 billion each.

Appropriated Budget Authority dollars for the Procurement, Marine Corps category are compared to requested amounts in Table 8. The pattern established by the Aircraft Procurement, Weapons Procurement, and Shipbuilding and Conversion categories is repeated, with the exception of FY 1989. In that year, unlike these three other categories, appropriated funds exceeded requested funds.

6. Appropriated versus Requested Dollars

Table 8 indicates that total procurement dollars appropriated in FY 1981 and FY 1982 were greater than requested amounts by $3.3 billion and $5.2 billion respectively. Appropriated amounts were again greater than requested amounts in FY 1988 and FY 1989. Appropriated budget authority exceeded requested budget authority by about $2.0 billion in FY 1988 and about $0.6 billion in FY 1989.

Total appropriations fell below total requests in fiscal

TABLE 8

DON Procurement BA
(in millions of current dollars)

	81	82	83	84	85	86	87	88	89
APN:									
Requested	4966	6962	11583	11128	11475	11794	11437	9935	8793
Appropriated	6254	9028	10184	10159	10898	10496	9368	9038	9342
WPN:									
Requested	2319	2717	3902	4028	4651	5155	5762	6015	5727
Appropriated	2766	3166	3447	3772	4353	4971	4991	5372	6086
SCN:									
Requested	6119	6641	18648	12700	13143	11209	11975	10769	10230
Appropriated	7720	8638	16137	11484	11636	10350	9042	15851	9573
OPN:									
Requested	3081	3460	3970	5001	5954	6220	6662	5227	5004
Appropriated	3030	3629	3666	4323	5341	6103	5803	4357	4685
PMC:									
Requested	468	1172	2301	1852	1979	1727	1565	1402	1157
Appropriated	507	1709	1961	1743	1817	1558	1434	1213	1292
Totals:									
Requested	16952	20952	40403	34709	37200	37431	36549	33878	30329
Appropriated	20277	26170	35395	31481	34045	33478	30638	35831	30978
Differences	-3325	-5210	5008	3228	3155	3953	5911	-1953	- 649

Source: Budget of the U. S. Government, fiscal years 1981-1989, U. S. Government Printing Office.

years 1984 through 1987. Total appropriations reached a current dollar high in FY 1988 at $35.8 billion. The peak year for administration procurement budget requests was FY 1983, at $40.4 billion.

C. SUMMARY

The preceding data discloses the overall increase in procurement dollars in terms of both current and constant FY 90 dollars. Total DON procurement budgets actually began increasing in FY 1978 and FY 1979 and continued erratic growth through out the 1980's. The largest single year increase occurred in FY 1983, when total DON procurement appropriations grew by more than 35 percent over the FY 1982 total. FY 1989 had the sharpest one year decline in budget authority with a drop of 14 percent from FY 1988.

A total of $268.0 billion was appropriated by Congress for DON Procurement from FY 1981 through FY 1989, an average of $29.8 billion per year. The Shipbuilding and Conversion category received $100.4 billion or roughly 37 percent of this total. Aircraft procurement received the second largest amount at $75.7 billion or 28 percent of total dollars granted. The Other Procurement category garnered $40.9 million, for 15 percent of the total. Weapons Procurement was a close fourth with 14.5 percent of the total at $38.9 billion. The category receiving the smallest percentage during this period was Procurement, Marine Corps at only 4.5 percent or $11.9 billion.

While granting these procurement dollars, Congress exceeded budget requests in FY 1981 by 8 percent, in FY 1982 by almost 25 percent, in FY 1988 by 6 percent, and in FY 1989 by only 2 percent.

The following section of this study provides an analysis of the budget figures and a possible explanation as to why Congress granted Budget Authority in excess of requests during the fiscal years cited.

IV. ANALYSIS

An examination of the distribution of funds among the five procurement categories reveals their similar trends. Reviewing the aggregate figures indicates that procurement fared best during the early growth years of the budget build up. It also sustained cuts in funding when total DOD budget growth leveled out and then declined during the build down years, but remained substantially above FY 1981 totals throughout this period.

Other studies[Ref. 9] [Ref. 10] have indicated this sensitivity of Procurement to the availability of funds. It gets the largest increases when funds are abundant, and sustains the largest decreases when budgets are declining when compared to the remaining components of the DON budget.

Arnold Kanter postulated an explanation for this in his article, "Congress and the Defense Budget:1960-1970". [Ref. 11] He suggested that Congress made larger changes to Procurement because it is easily broken down into areas which can be individually evaluated. It is, in other words, the most "politically visible" category of defense spending. This presumably would facilitate adding programs during periods of increased military spending and also make it easier to cut programs when funding became tighter.

Benson's study [Ref. 9] suggested that DON budgeting was basically incremental in nature but areas receiving particular attention from the Navy fare better than others at the hands of Congress. Procurement was one of the budget categories that did not lend itself completely to incremental budgeting analysis as a means of explaining significant changes She suggested that political events played a major role in determining budgets and budget shares. These events are said to include unemployment, inflation, industrial profits, and general economic conditions existing at the time budgets are being settled by Congress.[Ref. 7]

The procurement data presented in this study tend to support the suggestions that incremental budgeting is the primary but not the only important factor in setting budget shares. Each of the DON procurement budgets for the first three years during the 1981 to 1989 period experienced sharp increases over the year immediately preceding it. FY 1981's increase of 28 percent, in current dollars, over FY 1980 was exceeded by FY 1982's increase of 29 percent over FY 1981, which, in turn, was exceeded by FY 1983's 35 percent increase over FY 1982. These big jumps in Budget Authority seem to suggest that something other than incremental budgeting is required as an explanation for the changes.

The large budget increases early in the Reagan Administration helped to forge an overall trend upward in procurement dollars during the 1980's. The decade had its

first declining year when FY 1984 decreased by almost 11 percent from FY 1983's peak. FY 1985 returned procurement to an upward trend with an 8 percent increase over 1984. Even though FY 1986 and FY 1987 were years when procurement dollars declined, the drop was not enough to alter the general trend upward.

FY 1988 again pushed the trend upward through its 17 percent growth. FY 1989 ended the period with a negative 14 percent growth but left the decade with a positive average annual growth of almost 15 percent in current dollar terms. Even in constant FY 90 dollar terms, DON procurement experienced an overall average annual growth of more than 12 percent during this period. The Congressional Budget Office's (CBO) analysis of the President's budget published in March 1990 substantiates this significant peacetime growth.[Ref. 5]

Procurement Budget Authority is graphically depicted in constant dollars in Figure 3. Each of the five appropriation categories are graphed as well as the total DON procurement Budget Authority.

The graph shows that Aircraft Procurement followed the general upward trend but did not exhibit wild swings from year to year. The budget for aircraft procurement leveled out in the latter 1980's, indicating that the number of aircraft being purchased was not increasing. Spending on combat aircraft in particular fell back almost to the funding levels found at the beginning of the build up period.

Aircraft Procurement funding increased significantly during the build up to correct deficiencies in Naval aircraft readiness that resulted from lean budget years in the latter 1970's. If the present pattern of funding should turn even further downward, the Navy may again begin to experience similar declines in readiness. In an effort to prevent this degradation, the Navy requested $9.3 billion in Aircraft Procurement Budget Authority in FY 1990 and $9.8 billion in FY 1991. This level of funding would maintain the average operating level at approximately the FY 1989 level of 5000 aircraft.[Ref. 12]

The pattern for Weapons Procurement was also steadily upward, with relatively mild increases and decreases. Spending on strategic missiles made a large contribution to this growth, reflecting the Navy's strong nuclear capability. With the Trident II program resuming full rate production in FY 1991, this emphasis is likely to continue despite growing criticism of this policy in view of changing world conditions.[Ref. 13]

The Other Procurement category showed a similarly steady decade-long pattern. This category ended the decade with approximately a 15 percent growth over its FY 1981 total. This mild but steady growth pattern may reflect the lack of the glamorous appeal that aircraft and weapons procurements exhibit in their ability to garner large procurement dollars.

The trend for Procurement, Marine Corps appears almost flat, but, in fact, did experience an annual average real growth of about 36 percent from FY 1981 through FY 1989. This trend ended with the FY 1990 and FY 1991 budgets, as was predicted by the CBO.[Ref. 5]

The category with the most interesting graphical pattern was the Shipbuilding and Conversion appropriation. Figure 3

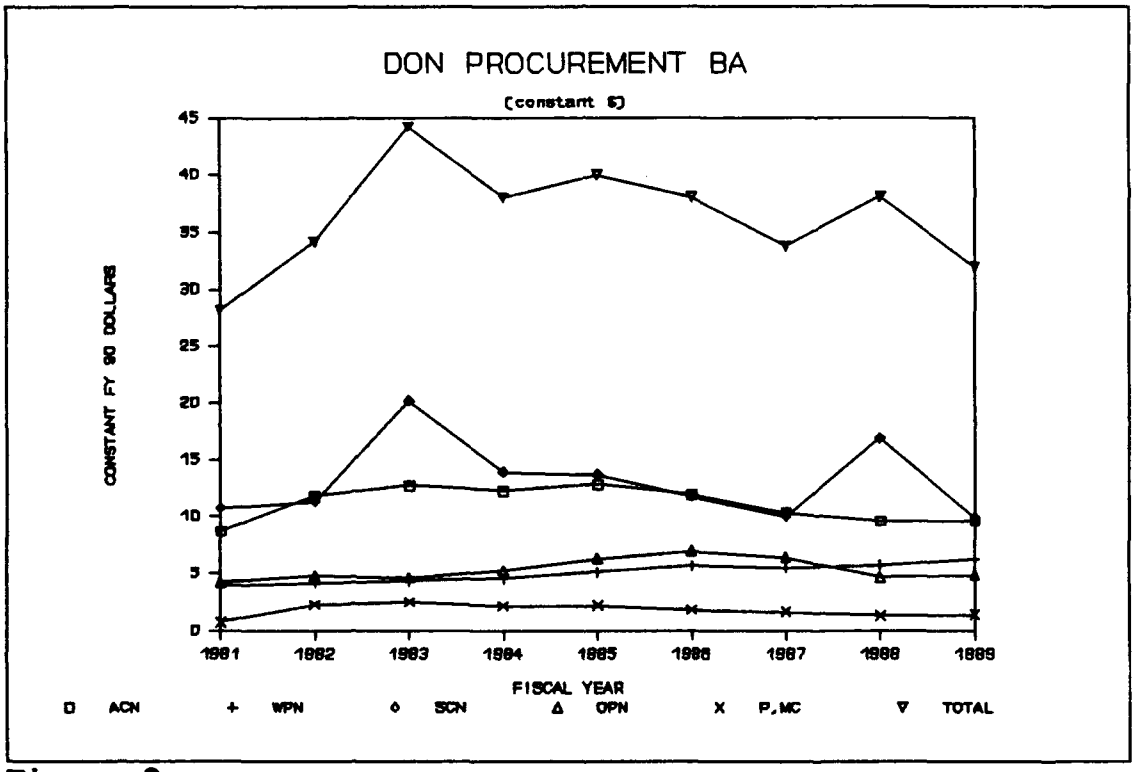

Figure 3

shows that this category's Budget Authority increases and decreases closely parallel those of the total DON procurement budget. With the goal of 600 ships apparently gone, the trend for the Shipbuilding and Conversion, Navy procurement budget will probably continue to follow the DON total procurement

budget as it heads downward in conjunction with the proposed DOD downsizing in the 1990's.

Budget cutting has brought into question spending on new weapon systems such as the Trident II missiles and the purchase of new SSN-21 attack submarines. If the Navy continues to deploy expensive new weapon systems such as these, the means to pay for them must be determined. This is especially true if the upward trend in Budget Authority of the 1980' is at an end.

Spending reductions in other appropriations, such as Operation and Maintenance, Navy, is one method that may be adopted to provide dollars to meet procurement budget requirements. A worst case result of this approach could lead to deficiencies like the "hollow force" of the 1970's that the Reagan build up helped to correct.

The climate surrounding the DON in the early years of the Reagan presidency was one of perceived deficiencies. Congress was ready to deal with the deficiencies and proceeded to do so by appropriating funds to correct the "hollow force" problems in Naval preparedness. Considering the climate at the time, Congress's propensity to alter budget shares that are relatively easy to change, and the administration's emphasis on military investments, procurement was an attractive target for additional dollars.

Pumping dollars into procurement not only put Congress at the forefront of meeting the challenge of Soviet military

investment but also affected those political events that hit home with the voters. Procurement dollars means jobs for constituents and each member of Congress must face constituent pressure to maintain these jobs. The reasons help explanation why Congress, in some years, appropriated dollars in excess of administration budget requests in the midst of the largest peacetime build up in U.S. history.

V. CONCLUSION

Budget Authority for DON procurement grew substantially during the FY 1981 to FY 1989 period. Procurement appropriations for Aircraft Procurement, Weapons Procurement, Shipbuilding and Conversion, Other Procurement, and Procurement, Marine Corps all paralleled the upward trend exhibited by total DON procurement dollars.

At least four conclusions may be drawn from this study of DON procurement budgets that took place during the Reagan presidency. First, the use of Budget Authority figures provides an effective tool for analysis. Budget Authority accurately reflects total buying power of DON procurement funding. It is easy to see when changes in initiatives and policies by Congress and the President have taken place by analyzing changes to Budget Authority levels.

These changes affect the budgeting and related political processes associated with DON procurement policies and thereby overall DON policies and goals. Sharp increases in Budget Authority requests by the administration for DON procurement budgets during this period reflect the renewed emphasis placed on the Navy as a principal player in the contest between the two world Superpowers.

Congress signalled its agreement with this emphasis by appropriating Budget Authority in excess of administration

requests in FY 1981 and FY 1982. This change in policy is especially reflected in the Budget Authority dollars devoted to aircraft and shipbuilding categories as Congress and the administration pursued the goal of a 600 ship Navy made up of 15 carrier battle groups.

A second and related conclusion that may be drawn is that procurement budgeting is not exclusively incremental in nature. The DON procurement budget, as complex as it is, does not lend itself to complete reviews during each annual budget cycle. This complexity makes some incremental changes necessary. The study pointed out, however, that sharp changes in the percentage of the total DON Budget Authority allocated to procurement are more likely to be explained by policy changes initiated by Congress and the President than by annual incremental budgeting.

The relative sensitivity of Don Procurement budgets to changes in the availability of funds is the third conclusion substantiated by this study. In the early years of the build up, when both Congress and the administration aggressively pursued increased military budgets, DON procurement Budget Authority expanded rapidly. Likewise, when overall military budgets began falling and dollar supplies tightened, DON procurement also declined significantly. The early large increases permitted DON procurement Budget Authority to maintain a positive growth trend during the 1980's, despite

negative real growth in some middle and later years of the decade.

The Navy began the decade of the 1980's in relatively poor condition. The Navy was not alone, as the other members of the Department of Defense had experienced similar difficulty in successfully accomplishing their missions. A highly publicized military failure in the Middle East brought these defense environment deficiencies into clear focus for many Americans. The failed Iranian hostage rescue attempt pointed out deficiencies in both the Army and the Navy.

Declines during the 1970's in manpower and budgets exacerbated problems associated with the equipment soldiers, sailors and airmen had available for use. Procurement budgets were inadequate to provide for the weapon systems necessary to meet U. S. obligations. At a time when it was believed that the Soviet Union had been investing heavily in military hardware, U. S. procurement budgets had headed in the wrong direction.

President Reagan came to office with campaign promises to not only restore the balance in defense spending between the U. S. and the U.S.S.R., but to put the U. S. ahead to stay. His plans intended to place the U. S. so far ahead that the Soviets could not keep up with U. S. investments. President Reagan's procurement budget requests for the DON clearly reflected the administration's intentions to make good on the campaign promises.

This study indicates that the turnaround in DON procurement budgets actually began under President Carter. The Reagan administration took this beginning and built on it to such a degree that the investments of the 1980's resulted in one of the largest peacetime buildups in U. S. Navy history.

The DON procurement budget received special attention from the Reagan presidency. The administration's plans called for a rebuilding of the Navy into a six hundred ship fleet. Although this goal was not achieved, the results of this emphasis on DON investment have ensured that the Navy is more ready to meet the challenges of the early 1990's than it was to meet the challenges of the late 1970's.

A final conclusion that may be drawn involves a look to the future. Changing world conditions, plus U.S. economic and budget conditions, have resulted in calls for a reduced military, which includes a shrinking of the Navy. As DOD budgets reduce, the Navy can and should expect its procurement budgets to decline also. Decisions concerning what types and how many aircraft, ships, and other investment items to acquire must be made with the expectation that fewer dollars will be available to make the purchases.

A maritime strategy for meeting the obligations of the U.S. Navy must be devised that takes account of reduced procurement funding and the reduced capability that entails. This strategy must permit the Navy to meet its goals and

objectives without reverting to a "hollow force" structure that pays only lip service to these commitments.

Although the growth in DON procurement budgets occurred during an unequaled peacetime buildup period, total DON procurement essentially followed historically established patterns. That pattern is one where procurement budgets fare well when funds appropriated by Congress are abundant and where procurement budgets experience sharply decreasing budget shares when appropriations dollars are tight.

As the Navy enters the 1990's, defense budgets are shrinking in real terms and are expected to continue to do so. It should be expected that DON procurement will continue to follow historical trends and experience significant reductions in current and real terms. As total military spending becomes more tightly controlled by Congress and the President, DON procurement will receive increased attention but not increased funding.

APPENDIX A

DON Budget Authority
(in billions of current dollars)

	1981	1982	1983	1984	1985
APN:					
Combat Aircraft	4076	6022	6207	6185	6034
Airlift Aircraft	37	101	279	189	238
Trainer Aircraft	56	74	50	31	103
Other Aircraft	45	73	76	174	120
Aircraft Mods.	693	910	1161	1140	1773
Parts & Spares	1096	1527	1959	1728	1334
Supt. Equipment	251	313	424	392	628
Net Financing	0	8	28	320	668
Subtotal	6254	9028	10184	10159	10898
WPN:					
Ballistic Mis.	876	926	667	616	265
Other Missiles	1341	1576	2024	2012	2823
Torpedos & Equip.	327	473	509	563	597
Other Weapons	194	191	159	157	188
Parts & Spares	0	0	0	0	0
Net Financing	28	0	88	424	480
Subtotal	2766	3166	3447	3772	4353
SCN:					
Bal. Mis. Ships	1134	331	1527	1262	861
Missile Ships	3494	5141	11810	4682	5815
Amphibious Ships	388	340	469	1225	495
Mine Warfare	1510	996	760	606	469
Other Ships	1092	1795	1455	1644	1448
Net Financing	102	35	116	2065	2548
Subtotal	7720	8638	16137	11484	11636

	1981	1982	1983	1984	1985
OPN:					
Ship Supt. Equip.	675	687	534	604	719
Com. Elect Equip.	1054	1155	1413	1465	1386
AV. Supt. Equip.	370	561	566	560	913
Ord. Supt. Equip.	597	827	695	853	1054
CEC Supt. Equip.	74	111	170	144	237
Sup. Supt. Equip.	69	76	88	58	94
Per./Coms. Equip.	191	212	228	205	386
Parts & Spares	0	0	0	0	0
Net Financing	0	0	-28	434	552
Subtotal	3030	3629	3666	4323	5341
PMC:					
Ammunition	82	307	449	419	538
Weapons/Vehicles	99	433	446	362	426
Guided Missiles	101	214	240	161	274
Coms. & Elec. Eq.	91	322	434	304	280
Support Vehicles	87	152	186	293	233
Engineering Eq.	47	281	206	202	118
Parts & Spares	0	0	0	0	0
Net Financing	0	0	0	2	-52
Subtotal	507	1709	1961	1743	1817
Grand Total	20277	26170	35395	31481	34045

APPENDIX A

DON Budget Authority
(in billions of current dollars)

	1986	1987	1988	1989
APN:				
Combat Aircraft	5762	6430	5570	5794
Airlift Aircraft	209	118	18	2
Trainer Aircraft	199	77	375	80
Other Aircraft	507	298	433	360
Aircraft Mods.	1181	1657	1207	900
Parts & Spares	1181	1669	1350	1179
Supt. Equipment	629	551	509	540
Net Financing	828	-1432	-424	487
Subtotal	10496	9368	9038	9342
WPN:				
Ballistic Missiles	550	1351	1533	2160
Other Missiles	3248	3069	2978	3103
Torpedos & Equip.	428	602	662	974
Other Weapons	159	283	100	110
Parts & Spares	83	150	109	110
Net Financing	503	-464	0	-371
Subtotal	4971	4991	5372	6086
SCN:				
Bal. Missile Ships	1076	1710	1125	1226
Missile Ships	5245	7440	12188	6700
Amphibious Ships	900	419	834	591
Mine Warfare	3890	247	71	380
Other Ships	1222	1915	831	1901
Net Financing	1518	-2689	802	-1225
Subtotal	10350	9042	15851	9573

	1986	1987	1988	1989
OPN:				
Ship Support Equip.	763	959	723	698
Comms. Elect. Equip.	1657	1860	1546	1411
AV. Support Equip.	867	877	748	553
Ord. Supt. Equip.	1069	1040	926	785
CEC Supt. Equip.	275	219	120	94
Sup. Supt. Equip.	78	88	81	94
Per./Coms. Equip.	430	590	447	469
Parts & Spares	141	279	267	542
Net Financing	823	-109	-501	39
Subtotal	6103	5803	4357	4685
PMC:				
Ammunition	486	552	375	280
Weapons/Vehicles	125	117	97	180
Guided Missiles	262	234	297	325
Coms. & Elec. Eq.	220	356	312	278
Support Vehicles	303	176	81	21
Engineering Eq.	175	185	187	129
Parts & Spares	26	37	44	62
Net Financing	-39	-223	-180	17
Subtotal	1558	1434	1213	1292
Grand Total	33478	30638	35881	30978

APPENDIX B

DON Budget Authority
(in billions of constant dollars)

	1981	1982	1983	1984	1985
APN:					
Combat Aircraft	5662	7867	7473	7748	7078
Airlift Aircraft	51	132	348	228	279
Trainer Aircraft	78	97	62	a37	121
Other Aircraft	63	95	95	210	141
Aircraft Mods.	963	1189	1449	1377	2080
Parts & Spares	1522	1995	2445	2088	1565
Supt. Equipment	349	409	529	474	737
Net Financing	0	10	35	387	784
Subtotal	8687	11794	12713	12274	12784
WPN:					
Ballistic Mis.	1217	1210	833	744	311
Other Missiles	1863	2059	2527	2431	3311
Torpedos & Equip.	454	618	635	680	700
Other Weapons	269	250	198	190	221
Parts & Spares	0	0	0	0	0
Net Financing	39	0	110	512	563
Subtotal	3842	4136	4303	4557	5106
SCN:					
Bal. Mis. Ships	1575	423	1906	1525	1010
Missile Ships	4853	6716	14742	5657	;6821
Amphibious Ships	539	444	585	1480	581
Mine Warfare	2098	1301	949	732	550
Other Ships	1517	2345	1816	1986	1699
Net Financing	142	46	145	2495	2989
Subtotal	10724	11284	20144	13875	13649

	1981	1982	1983	1984	1985
OPN:					
Ship Supt. Equip.	938	897	667	730	843
Com. Elect Equip.	1464	1509	1764	1770	1626
AV. Supt. Equip.	514	733	707	677	1071
Ord. Supt. Equip.	829	1080	868	1031	1236
CEC Supt. Equip.	103	145	212	174	278
Sup. Supt. Equip.	96	99	110	70	110
Per./Coms. Equip.	265	277	285	248	453
Parts & Spares	0	0	0	0	0
Net Financing	0	0	-35	524	648
Subtotal	4209	4741	4576	5223	6265
PMC:					
Ammunition	114	401	560	506	631
Weapons/Vehicles	138	566	557	437	500
Guided Missiles	140	280	300	195	321
Coms. & Elec. Eq.	126	421	542	367	328
Support Vehicles	121	199	232	354	273
Engineering Eq.	65	367	257	244	138
Parts & Spares	0	0	0	0	0
Net Financing	0	0	0	2	-61
Subtotal	704	2233	2448	2106	2131
Grand Total	28166	34187	44183	38034	39935

APPENDIX B

DON Budget Authority
(in billions of constant dollars)

	1986	1987	1988	1989
APN:				
Combat Aircraft	6554	7078	5920	5963
Airlift Aircraft	238	130	198	2
Trainer Aircraft	226	85	399	82
Other Aircraft	577	328	460	371
Aircraft Mods.	1343	1824	1283	926
Parts & Spares	1343	1837	1435	1213
Supt. Equipment	716	607	531	556
Net Financing	942	-1576	-451	501
Subtotal	11939	10313	9607	9615
WPN:				
Ballistic Missiles	626	1487	1629	2223
Other Missiles	3695	3378	3155	3194
Torpedos & Equip.	487	663	704	1002
Other Weapons	181	312	106	113
Parts & Spares	94	165	116	113
Net Financing	572	-511	0	-382
Subtotal	5655	5494	5710	6264
SCN:				
Bal. Missile Ships	1224	1882	1196	1262
Missile Ships	5966	8190	12955	6896
Amphibious Ships	1024	461	886	608
Mine Warfare	442	272	75	391
Other Ships	1390	2108	883	1957
Net Financing	1727	-2960	852	-1261
Subtotal	11773	9954	16848	9853

	1986	1987	1988	1989
OPN:				
Ship Support Equip.	843	868	1056	768
Comms. Elect. Equip.	1885	2048	1643	1452
AV. Support Equip.	986	965	795	569
Ord. Supt. Equip.	1216	1145	984	808
CEC Supt. Equip.	313	241	128	97
Sup. Supt. Equip.	89	97	86	97
Per./Coms. Equip.	489	649	475	483
Parts & Spares	160	307	284	558
Net Financing	936	-120	-533	40
Subtotal	6942	6388	4631	4822
PMC:				
Ammunition	553	608	399	288
Weapons/Vehicles	142	129	103	185
Guided Missiles	298	258	316	334
Coms. & Elec. Eq.	250	392	332	286
Support Vehicles	345	194	86	22
Engineering Eq.	199	204	199	133
Parts & Spares	30	41	47	64
Net Financing	-44	-245	-191	17
Subtotal	1772	1579	1289	1330
Grand Total	38082	33727	38086	31883

APPENDIX C

Department of Defense
Budget Authority Deflators

Fiscal Year	Procurement
1981	0.7199
1982	0.7655
1983	0.8011
1984	0.8525
1985	0.8525
1986	0.8791
1987	0.9084
1988	0.9408
1989	0.9716
1990	1.0000

LIST OF REFERENCES

1.Bacon, Alan J., The V-22 Program's Need For a More Flexible and Farsighted Acquisition Strategy, Student's Report, Air Command and Staff College, Maxwell AFB, Alabama, 1988.

2.Mayer, Allan J., David C. Martin, John H. Lindsay. "Is America Strong Enough?", Newsweek, 27 Oct. 1980, p. 48.

3.Office of the Assistant Secretary of Defense (Comptroller), National Defense Budget Estimates for FY 1990/1991, March 1989.

4.Secretary of Defense Annual Report to Congress for fiscal years 1980 through 1990, Washington, D. C.: United States Government Printing Office.

5.Congressional Budget Office, An Analysis of the President's Budgetary Proposals for FY 81-91, Washington, D.C.: United States Government Printing Office, 1982.

6.Gregory, William H., "Reagan's Defense Budget", Aviation Week & Space Technology, Vol. 114 No. 12, 23 March 1981.

7.Mintz, Alex, The Politics of Resource Allocation in the U. S. Department of Defense: International Crises and Domestic Constraints, Boulder & London: Westview Press, 1988.

8.Collender, Stanley E., The Guide to the Federal Budget FY 87, Washington, D. C.: The Urban Institute Press, 1986.

9.Benson, Janet G., Appropriations Distribution Trends with Regard to the Availability of Funds in the DON Budget, M.S. Thesis, Naval Postgraduate School, Monterey, California, December 1985.

10.Anderson, John, Distribution of Budgeted Outlays With Regard to the Availability of Funds in the DOD, M.S. Thesis, Naval Postgraduate School, Monterey, California, June 1983.

11.Kanter, A., "Congress and the Defense Budget: 1960-1970", American Political Science Review, 66:129-143, 1972, cited by J. G. Benson, Appropriations Distribution Tends with Regard to the Availability of Funds in the DON Budget, M.S. Thesis, Naval Postgraduate School, Monterey, California, December 1985.

12.Department of the Navy, "Highlights of the FY 1991 Department of the Navy Budget", January, 1990.

13.Summers, Colonel Harry G., Jr., "A Bankrupt Military Strategy", The Atlantic Monthly, June, 1989.

INITIAL DISTRIBUTION LIST

1.	Defense Technical Information Center Cameron Station Alexandria, Virginia 22304-6145	2
2.	Library, Code 52 Naval Postgraduate School Monterey, California 93943-5002	2
3.	Herschel H. Rector LT, SC, USN 1228 Handel Drive Virginia Beach, Virginia 23454	1
4.	Professor Richard B. Doyle, Code AS/DY Department of Administrative Sciences Naval Postgraduate School Monterey, California 93943-5002	1
5.	Professor Doug Moses, Code AS/MO Department of Administrative Sciences Naval Postgraduate School Monterey, California 93943-5002	1